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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,795	08/17/2006	Teruo Higa	939_079	8688
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SYRACUSE, NY 13261-7068				
EXAMINER				
KIM, TAEYOON				
ART UNIT		PAPER NUMBER		
1651				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/589,795

Applicant(s)

HIGA, TERUO

Examiner

TAEYOON KIM

Art Unit

1651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Applicant's amendment and response filed on 7/23/2009 has been received and entered into the case.

Claims 1-6 are canceled, claims 7-9 are newly added, and claims 7-9 are pending and have been considered on the merits. All arguments have been fully considered.

Response to Amendment

The declaration under 37 CFR 1.132 filed 7/23/2003 is moot due to the withdrawal of the previous claim rejection.

Specification

The objection to the specification has been withdrawn due to the cancellation of the objected claims.

The substitute specification filed 7/23/2009 has been entered.

Claim Rejections - 35 USC § 112

The claim rejection under 35 U.S.C. § 112, has been withdrawn due to the cancellation of the rejected claims.

Claim Rejections - 35 USC § 103

The claim rejection under 35 U.S.C. § 103 to claims 1-6 has been withdrawn due to the cancellation of the rejected claims.

Claim Objections

Claims 7-9 are objected to because of the following informalities: The term "facultative anaerobe effective microorganisms" appears to be more appropriate as "facultative anaerobic effective microorganisms". Appropriate correction is required.

Claim Rejections - 35 USC § 112-New Rejection

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term “a soap product raw material” in claims 7-9 is vague what subject matter the term intends to point out. It can be interpreted that a soap product being a raw material or any raw material used for a soap product. The specification particularly teaches the use of fats as a raw material but there is no disclosure of the term “a soap product raw material” in the specification (see below a new matter rejection). Applicant is advised to use the term "fats" instead of "a soap product raw material".

The phrase “enhances a degree of saponification of the soap product during the production thereof” in lines 13-14 of claim 7 is not clear. This limitation can be interpreted that the soap product, which is considered as a final product, is subjected to saponification. It appears that the saponification is for fats added to the soap production process, rather than “soap product”. Clarification is required.

The phrase “a fat of the soap product raw material” in claim 8 is not clear what subject matter the phrase intends to claim.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 7-9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a new matter rejection.

The term "a soap product raw material" in claims 7-9 does not have an adequate support from the specification. While the specification discloses "a raw material" in context with fats being used as a raw material (p.7 of substitute specification), there is no disclosure of "a soap product raw material."

The limitation of "enhance a decomposition rate of indigenous pollutants in the waste water system to accelerate water purification" in claims 7-9 does not have an adequate support from the specification.

In amended cases, subject matter not disclosed in the original application is sometimes added and a claim directed thereto. Such a claim is rejected on the ground that it recites elements without support in the original disclosure under 35 U.S.C. 112, first paragraph, *Waldemar Link, GmbH & Co. v. Osteonics Corp.* 32 F.3d 556, 559, 31 USPQ2d 1855, 1857 (Fed. Cir. 1994); *In re Rasmussen*, 650 F.2d 1212, 211 USPQ 323 (CCPA 1981). See MPEP § 2163.06 - § 2163.07(b) for a discussion of the relationship of new matter to 35 U.S.C. 112, first paragraph. New matter includes not only the addition of wholly unsupported subject matter, but may also include adding specific percentages or compounds after a broader original disclosure, or even the omission of a step from a method. See MPEP § 608.04 to § 608.04(c).

Claim Rejections - 35 USC § 103-New Rejection

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higa (of record) in view of Bradford (US 2,539,889).

Higa teaches a method of preparing a composition comprising ceramic materials and a microorganism and/or culture fluid thereof, wherein the microorganisms are capable of producing an antioxidation material (abstract). Higa also teaches the raw ceramic materials including clay are mixed with the EM to form ceramic (col. 2, lines 39-42).

Higa teaches that the microorganisms are selected from each of five groups of actinomycetes, phototrophic bacteria, lactic acid bacteria, mold fungi and yeast (col. 2, lines 31-35), thus meets the limitation of facultative anaerobic effective microorganisms (EM) including at least lactic acid bacteria, photosynthetic bacteria and yeast.

Although Higa does not particularly teach the process of forming a ceramic powder catalyst by mixing a clay and a condensed liquid of an antioxidant substance produced by EM, aging and baking the mixture, since the method of making a function ceramic by mixing EM, as a culture fluid, thus containing an antioxidant, with a clay followed by drying (interpreted as aging) and calcination (interpreted as baking) (col. 3, 9-31), taught by Higa is considered the same as the method steps of forming ceramic powder catalyst and mixing with EM claimed in the instant invention.

Although Higa does not teach the process of using a raw material such as fat used for soap production, and the steps of emulsification and saponification, it is extremely well known in the art that fats are commonly used for soap production, and emulsification and saponification are the steps of generating soap according to Bradford (col. 4, lines 3-29). Since the functional ceramic product of Higa is useful for deodorizing and cleaning, a person of ordinary skill in the art would recognize that the product of Higa would be formed as a soap product, and it would have been obvious to a person of ordinary skill in the art to try processes of Bradford for the production of soap using the composition of Higa with a reasonable expectation of success.

With regard to the limitation that the ceramic powder catalyst enhances a degree of saponification of the soap product, and the limitation of the “wherein” clause, these limitations are not required for the claimed method as active steps, rather they are considered as intended results or effects obtainable from the using the product made by the claimed process. Therefore, these limitations merely state the result of the limitations in the claim and therefore, add nothing to the patentability or substance of the claim. Therefore, this phrase does not limit the claim. See *Texas Instruments Inc. v. International Trade Commission*, 26 USPQ2d 1010 (Fed. Cir. 1993); *Griffin v. Bertina*, 62 USPQ2d 1431 (Fed. Cir. 2002); *Amazon.com Inc. v. Barnesandnoble.com Inc.*, 57 USPQ2d 1747 (Fed. Cir. 2001).

With regard to the step of adding a fermented liquid containing a facultative anaerobic EM after the saponification step to provide a liquid soap product, the culture liquid of EM, which contains antioxidant materials, taught by Higa is considered the same as the fermented liquid containing of facultative anaerobic EM of the claimed invention. Since the culture fluid/liquid of Higa by itself can be used as a deodorizing and cleaning material, it would have been obvious to

a person of ordinary skill in the art to combine the culture fluid/liquid of Higa with the soap formed by saponification of EM ceramic mixed with a raw material such as fat for the same purpose, and the resulting combination would be in liquid form and suitable for a liquid soap.

It is well established that duplicating components with similar functions within a composition is obvious; see *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960) and M.P.E.P. § 2144.04.

In addition, M.P.E.P. §2144.06 states “It is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose. [T]he idea of combining them flows logically from their having been individually taught in the prior art.” *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980) (citations omitted) (Claims to a process of preparing a spray-dried detergent by mixing together two conventional spray-dried detergents were held to be prima facie obvious.). See also *In re Crockett*, 279 F.2d 274, 126 USPQ 186 (CCPA 1960) (Claims directed to a method and material for treating cast iron using a mixture comprising calcium carbide and magnesium oxide were held unpatentable over prior art disclosures that the aforementioned components individually promote the formation of a nodular structure in cast iron.); and *Ex parte Quadranti*, 25 USPQ2d 1071 (Bd. Pat. App. & Inter. 1992) (mixture of two known herbicides held prima facie obvious).

Therefore, the invention as a whole would have been prima facie obvious to a person of ordinary skill at the time the invention was made.

Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Irie (of record) in view of Bradford (supra).

Irie teaches that the EM ceramic comprising a clay and EM-X extracted from EM, and EM-X having an antioxidant enzyme extracted from EM (abstract), and the product of EM ceramic or EM-X ceramic can be used for wash, deodorization, etc. (p.1-2, par. 2-3).

Irie teaches that the EM mainly consists of lactic acid bacteria, a yeast, fungus, photosynthetic bacteria (p.3, par. 7). Although Irie does not particularly disclose that EM is a facultative group of lactic acid bacteria, yeast and photosynthetic bacteria, it would have been obvious to combine the known EM for the same purpose would be obvious. See M.P.E.P. §2144.06.

Although Irie does not particularly teach the process of forming a ceramic powder catalyst by mixing a clay and a condensed liquid of an antioxidant substance produced by EM, aging and baking the mixture, since the EM-X ceramic taught by Irie is considered the same product disclosed in the specification of the current invention (p.3 of the original specification), it is considered the EM-X ceramic of Irie is made by the same process claimed in the current invention.

Although Irie does not teach the process of using a raw material (e.g. fat) used for soap production, and the steps of emulsification and saponification, it is extremely well known in the art that fats are commonly used for soap production, and emulsification and saponification are the steps of generating soap according to Bradford (col. 4, lines 3-29). Since the functional ceramic product of Irie is useful for deodorizing and cleaning, a person of ordinary skill in the art would recognize that the product of Irie would be formed as a soap product, and it would have

been obvious to a person of ordinary skill in the art to try processes of Bradford for the production of soap using the composition of Irie with a reasonable expectation of success.

With regard to the limitation that the ceramic powder catalyst enhances a degree of saponification of the soap product, and the limitation of the “wherein” clause, these limitations are not required for the claimed method as active steps, rather they are considered as intended results or effects obtainable from the using the product made by the claimed process. Therefore, these limitations merely state the result of the limitations in the claim and therefore, add nothing to the patentability or substance of the claim. Therefore, this phrase does not limit the claim. See *Texas Instruments Inc. v. International Trade Commission*, 26 USPQ2d 1010 (Fed. Cir. 1993); *Griffin v. Bertina*, 62 USPQ2d 1431 (Fed. Cir. 2002); *Amazon.com Inc. v. Barnesandnoble.com Inc.*, 57 USPQ2d 1747 (Fed. Cir. 2001).

With regard to the step of adding a fermented liquid containing a facultative anaerobic EM after the saponification step to provide a liquid soap product, Irie teaches that EM bacillus demonstrate to have deodorization and outstanding antioxidative activity, which is usually provided as solution, and the EM solution which containing antioxidant materials is considered the same as the fermented liquid containing of facultative anaerobic EM of the claimed invention. Since the EM solution of Irie by itself can be used as a deodorizing with outstanding antioxidative activity, it would have been obvious to a person of ordinary skill in the art to combine for the same purpose the EM solution of Irie with the soap formed by saponification of EM ceramic mixed with a raw material such as fat, and the resulting combination would be in liquid form and suitable for a liquid soap.

It is well established that duplicating components with similar functions within a composition is obvious; see *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960) and M.P.E.P. § 2144.04.

In addition, M.P.E.P. §2144.06 states “It is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose. [T]he idea of combining them flows logically from their having been individually taught in the prior art.” *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980) (citations omitted) (Claims to a process of preparing a spray-dried detergent by mixing together two conventional spray-dried detergents were held to be prima facie obvious.). See also *In re Crockett*, 279 F.2d 274, 126 USPQ 186 (CCPA 1960) (Claims directed to a method and material for treating cast iron using a mixture comprising calcium carbide and magnesium oxide were held unpatentable over prior art disclosures that the aforementioned components individually promote the formation of a nodular structure in cast iron.); and *Ex parte Quadranti*, 25 USPQ2d 1071 (Bd. Pat. App. & Inter. 1992) (mixture of two known herbicides held prima facie obvious).

Therefore, the invention as a whole would have been prima facie obvious to a person of ordinary skill at the time the invention was made.

Conclusion

No claims are allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAEYOON KIM whose telephone number is (571)272-9041. The examiner can normally be reached on 8:00 am - 5:00 pm ET (Mon-Thu).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Taeyoon Kim/
Primary Examiner, Art Unit 1651